

Knee Osteoarthritis (OA)

Patient Information Leaflet

MSK Musculoskeletal Physiotherapy Service



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www.leicspart.nhs.uk/msk-physiotherapy-resources-getting-started/

What is osteoarthritis?

Osteoarthritis (OA) is a condition that can cause pain and stiffness in the joints. It can affect any joint in the body. The joints most commonly affected are the knees, hips, back, feet and hands.

Cartilage is a coating of tough but smooth and slippery tissue that cushions the ends of the bones. This helps the joint to move freely.

Over time, this layer can start to thin or roughen. When this happens, the body goes through a repair process. Small bony growths (osteophytes) may develop around the joint. Fluid can also build up inside. This reduces the space within the joint, which may make the joint feel stiff and not move as smoothly.

Symptoms of osteoarthritis

You may notice:

Pain

Pain is often worse when using the joint. The pain can come and go.

Stiffness

Often stiffness is worse after rest, especially in the morning. It usually improves once you start moving.

Swelling

This may feel hard (extra bone) or soft (fluid).

Clicking or cracking (crepitus)

This may feel strange but does not usually mean damage is happening.

Feeling unsteady

This is often due to weak muscles but can also be due to the joint structure becoming less stable.

Why does it happen?

We do not know exactly what causes osteoarthritis.

Things that increase your risk include:

- previous injury or surgery on a joint
- being overweight
- joint conditions from birth or childhood
- family history (genetics)
- other joint conditions (like gout)

Do I need an X-ray?

You usually do **not** need an X-ray or scan.

X-rays do not always match how much pain you feel.

Current guidelines for osteoarthritis recommend a diagnosis is made based on your symptoms and do **not** recommend routine x-rays or scans.

These guidelines recommend that a diagnosis of osteoarthritis can be made if:

- you are aged 45 or over
- you have joint pain with activity
- you have no morning stiffness or morning stiffness that lasts less than 30 minutes

The current guidelines are linked in the 'Helpful Resources' section at the end of this leaflet.

Treatment

There are many ways to manage osteoarthritis without surgery. Current guidelines tell us that the most helpful treatments are exercise and weight management.

Exercise

Exercise is one of the best ways to help your joints. Some people worry it will make things worse, but too much rest can increase pain and stiffness. Regular movement helps joints stay healthy.

Exercise should include:

- Aerobic exercise (like walking or cycling)
- Strength exercises (to build muscle)

Guidelines suggest:

- A minimum of 150 minutes of moderate-intensity activity per week – something that raises your heart rate and gets you breathing more heavily
- Strength exercises twice a week

People with osteoarthritis may experience an increase in joint pain and soreness when they start new exercise. Despite this, doing regular and consistent exercise is safe and will be beneficial for the joints in the long term.

Exercises

The following exercises can help improve the strength and flexibility of the muscles around your knee.

Strength

Exercises to improve strength

aim to repeat each exercise **up to 10 times**

rest between sets

gradually build up to **3 sets of 10 repetitions**

1. Isometric strengthening

Lie flat on your back.

Tighten your thigh (quadriceps) muscle by actively tensing/squeezing the muscle, noticing that as you do so your leg will naturally straighten slightly.



Relax.

rehabmypatient.com

Watch the video here: <https://youtu.be/Wmvk9g3RGks>

2. Knee extension in sitting

Sitting upright on a chair.

Slowly straighten your leg out in front of you as far as feels comfortable. Slowly lower back to the floor.

Watch the video here:

<https://youtu.be/uklsfS5YTXA>



3. Sit to stand

Sitting upright in a chair.

Gently lean forwards and use as much leg and core strength as you can to push yourself up into standing.

If you get stuck, use one or both arms to assist.

Return to the starting position.

Watch the video here: https://youtu.be/2rVOvOU_vmE



4. Step up and down

Holding on to a rail for support.

Step up onto the first step with one leg and bring the other leg to the step to meet it.

With control, lower this same foot back to the floor, followed by the other.

Watch the video here:

<https://youtu.be/rHCT8vYgImQ>



Flexibility

Exercises to improve flexibility

hold these stretches for **up to 10 to 30 seconds**

repeat up to **3 times**

1. Hamstrings stretch

Sitting on a chair.

Straighten one leg in front of you.

Gently lean forwards.

You should feel a stretch behind the back of the leg and the calf.



Watch the video here: <https://youtu.be/ahzqWHaUx44>

2. Quadriceps stretch

Stand holding onto a chair for support.

Pull your foot towards your bottom.

If you are unsteady on your feet, hold onto something stable.



You should feel the stretch in the front of your thigh.

Watch the video here: <https://youtu.be/430IUQz6YP4>

3. Calf stretch

Stand with your hands against the wall.

Keeping your heels on the floor, lean forwards bringing your hips towards the wall.

Feel a stretch in your calves.



Watch the video here:

<https://youtu.be/CuDokIMpFWo>

Balance

Exercises to improve balance

Guidelines recommend that older adults perform
balance exercises:

at least **twice a week** to help reduce the risk of falls and
support healthy ageing

repeat each exercise **3 times**

1. Straight-line balance standing

Hold a wall or table for
support if you feel unsteady.

Place one foot in front of the
other, with the heel of one
foot against the toes of the
opposite foot.

Try to look straight ahead of
you.

Repeat with your other foot in front.

Watch the video here: <https://youtu.be/qD9UraYLOV8>



2. Single leg stand

Stand on one leg. Hold a wall or table for support if you feel unsteady.

Hold this position for up to 30 seconds.

To make this harder, you could try standing on a cushion.



Watch the video here: <https://youtu.be/3j0O6jRe8uY>

Weight Management

Guidelines recommend weight loss for people with osteoarthritis who are living with overweight or obesity.

Carrying excess body weight leads to greater forces through the joints. Obesity may also increase pain because body fat produces chemicals that can contribute to inflammation.

Weight loss can:

- reduce symptoms of osteoarthritis
- improve function and quality of life
- slow symptoms getting worse

Even small weight loss can make a difference.

A healthy, balanced diet is recommended. There isn't a specific diet that is proven to help with osteoarthritis.

In most cases, there is little evidence to support that supplements and herbal remedies can improve osteoarthritis or its symptoms, but people may feel they do benefit from them.

For more information on eating well and to support weight management visit www.leicestershirewms.co.uk/

Pain Relief

You can try using heat or ice to help ease the symptoms.

Medication in the form of tablets, prescribed by your doctor or pharmacist, may also help. In some cases, an injection can be helpful.

These may only help in the short term.

Pacing Activities

Break tasks, such as large amounts of housework or gardening, into smaller more manageable chunks. Avoid doing too much at once where possible.

As you continue to exercise and gradually build your activity, your strength and fitness will improve, and it is likely that you will then be able to do more of the activity before your pain comes on.

How will osteoarthritis affect me?

Osteoarthritis affects everyone differently. For most people, it does not get steadily worse over time.

Symptoms may come and go. You may have flare-ups, where your pain increases for a few days or weeks then settles down again. This is a common feature of osteoarthritis.

Flare-ups can be caused by:

- doing too much (e.g. an unusually long walk)
- an injury (such as a fall)
- stress
- weight gain
- a combination of factors

Sometimes there is no clear reason as to why the symptoms have flared up.

Managing flare-ups well can help you return quickly to the activities that matter to you.

Tips to manage a flare-up of symptoms

Remember: flare-ups are temporary.

Manage your symptoms: consider the use of pain relief or other strategies such as heat, ice, gentle exercises, or relaxed breathing.

Avoid complete rest: ease off activities during the first few days as needed. Try not to rest too much. Complete rest can make your joints stiffer and weaker.

Pace your activity: it may be necessary to temporarily adjust your activity levels. Break activities into smaller tasks.

Set yourself a goal: small, simple and achievable goals.

Make a flare-up plan: making a flare-up plan can be a useful reminder for things that you find helpful. Having a plan can help you feel more in control of your symptoms.

When should I seek further help?

Speak to a GP or physiotherapist if:

- your symptoms are getting worse
- pain is significantly affecting your daily life

Surgery (for joint replacement) may be an option for osteoarthritis but is not always required.

Remember

Exercise is one of the best treatments.

Managing your weight can help.

Osteoarthritis does not always get worse.

Staying active can reduce pain and improve your quality of life.

Surgery is not always needed.

Helpful Resources

LPT MSK Physiotherapy Videos

Part One: Understanding Osteoarthritis

www.youtube.com/watch?v=2kzalpiTSoo

Part Two: Managing Osteoarthritis

www.youtube.com/watch?v=c27bFJjrJMY

ESCAPE–Pain

A free nationally recognised, evidence-based education & exercise programme

<https://escape-pain.org/support-tools-2/>

Versus Arthritis

www.arthritis-uk.org/information-and-support/understanding-arthritis/conditions/osteoarthritis/

NICE Guidelines for Osteoarthritis

www.nice.org.uk/guidance/ng226

Eating Well and/or Weight Management

www.leicestershirewms.co.uk/

Acknowledgements



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If you need help to understand this leaflet or would like it in a different language or format such as large print, Braille or audio, please ask a member of staff.



MSK Physiotherapy Service

Find out more about the MSK Physiotherapy Service and what we offer

www.leicspart.nhs.uk/service/musculoskeletal-msk-therapy-physiotherapy/



Further Resources

Access our other MSK Physiotherapy resources www.leicspart.nhs.uk/msk-physiotherapy-resources-getting-started/

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